ENDOLUMINAL PROSTHESES AND THERAPIES FOR HIGHLY VARIABLE BODY LUMENS

ABSTRACT OF THE DISCLOSURE

The present invention provides a branching endoluminal prosthesis for use in branching body lumen systems which includes a trunk lumen and first and second branch lumens. The prostheses comprises a radially expandable tubular trunk portion having a prosthetic trunk lumen, and radially expandable tubular first and second branch portions with first and second prosthetic branch lumens, respectively. A radially expandable tubular Y-connector portion provides fluid communication between the prosthetic trunk lumen and the first and second prosthetic branch lumens. Although it is often considered desirable to maximize the column strength of endoluminal prostheses, and although the trunk portion will generally have a larger cross-section than much of the remainder of a branching endoluminal prostheses, the expanded trunk portion is more axially flexible than the expanded Y-connector portion, as insufficient flexibility along the trunk portion may result in leakage between the prosthesis and the trunk lumen of the body lumen system. In contrast, the Y-connector portion benefits form a less axially flexible structure to avoid distortion of the flow balance between the luminal branches.